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OVARIOTOMY.

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THE inquiry is sometimes made, whether, upon the whole, ovariectomy has really undergone any essential improvement since it was first ventured upon as a justifiable operation?

A candid answer to another question may suffice for both. Does the history of the operation, as gathered from the published cases of the most experienced operators of the present day, show that in a given number of cases the proportion of recoveries has materially increased within the past few years? To this last question no one will hesitate to give an affirmative answer.

If it be further asked, to what special change, whether in the manner of operating, or in any other respect, the improvement referred to is justly attributable, it may be somewhat difficult to answer.

The distinguished operators of Great Britain—Spencer Wells, Baker Brown, Tyler Smith and Thomas Bryant of London, Mr. Clay of Manchester, and Dr. Thomas Keith of Edinburgh—illustrate pretty fully and decidedly the various methods of operating, not only in England, but all over the world; and we observe that these different methods vary very little from what they were years ago.* The present improv-

ed record is not, therefore, properly attributable to any important and especially marked change as regards either special or general rules of operating; it must be accounted for in some other way. Greater skill in diagnosis, habit of operating, a better understanding of the best way of dealing with complications, together with more correct views with regard to meeting difficulties arising subsequently to an operation, seem to afford the most reasonable explanation of the superior success of the distinguished surgeons alluded to.

Even in cases of the simplest, and in every respect of the most favorable character, cases where the method of operating is as precisely determined, and as easily comprehended as it is in amputation, or any other equally common and as easily performed operation, it will be found that the best results are almost invariably with those who count the greatest number of cases.

But the majority of ovarian cases are not simple; that is, absolutely free of every form of condition tending to lessen the chances of a successful removal; moreover, no degree of diagnostic skill can ever predetermine with positive certainty what these conditions may prove to be, either as to their nature or their extent. Under these circumstances, the surgeon derives great advantage from *past experience*. Unforeseen and unexpected difficulties, as they present themselves in the progress of an operation, are thus more correctly appreciated, and of course more likely to be dealt with in a manner best calculated to prove successful.

In view of the many hundreds of cases that have already been published, and with the details of which the profession generally have been able to inform themselves, something, no doubt, has been accomplished to render ovariectomy, even in the hands of the mere occasional operator, a more

By ovariectomists generally, the "pocketing" practice of Dr. Storer will probably never be considered as furnishing anything new or essentially important in practice; much less will it be likely to supersede or materially modify the practice so long and so successfully pursued by Spencer Wells and other European ovariectomists.

[WHOLE No. 2116.]

successful operation ; so that, although, as comparatively estimated, favorable results are evidently more marked with those of the largest experience, a just and complete statement of all known cases, both published and unpublished, would show, probably, that the record of recoveries, as compared with deaths during the last five or ten years, has been decidedly improved.

In the simpler forms of development, no adhesions or other obstacle interfering, the removal of an ovarian tumor requires but little operative skill. The rules of procedure in such cases are plain, and the proper observance of them may be reasonably expected to secure a favorable result. The same remark, I am well aware, is more or less true with regard to every department of operative surgery ; it is especially so as applied to the one under consideration, where the surgeon may scarcely expect to meet with two cases alike ; and where, consequently, he may sometimes find it necessary to adopt a plan of action wholly new to himself, and for aught he may know never yet tried by any other operator. The advantages of the plan thus pursued may be limited to the particular case in hand, or it may be found applicable to a certain class of cases in which the usual method of treatment has hitherto proved insufficient and unsatisfactory. This point I propose to illustrate in the following cases.

Mrs. H., of Danbury, N. H., 57 years old, mother of several children, and till recently pretty healthy, consulted me late in April, 1866, on account of an ovarian tumor which she says she had carried 23 years. Latterly, it has increased rapidly in size, till now it is enormously large. Her constitution is also giving way, as shown by great emaciation, prostration, difficulty of breathing, cedema of lower limbs, with various other symptoms incident to the advanced state of the disease.

Finding no relief from medical treatment, she resolved, at last, to take the risk of an operation. The tumor was accordingly removed on the 1st of May, 1866. The disease being evidently cystic, and apparently of unilocular character, the operation was begun in the hopes of effecting its removal without extensively exposing the abdominal cavity. With this view, an incision only four inches in length was first made through the parietes, midway between the umbilicus and pubes. At this point, however, it was found that the cyst walls and the parietes were firmly adherent. A second incision, higher up, showed the parts in the same condition. Upon making a

third incision, between the umbilicus and sternum, the parts were found still united, but less firmly. With a good deal of force, the adhesion at this point could be overcome ; but before doing so to any considerable extent, the three incisions were reduced to a single one, whose entire length was now about ten inches.

After first evacuating the cyst of its contents (consisting of 75 pounds of a chocolate colored albuminous fluid), the next thing was to separate it from its connection with the parietes. This was effected only with much difficulty, and consequently with great laceration of tissue. The extent of adhesion embraced an area of about twelve inches in diameter, and was limited to the anterior and lateral portions of the parietes. The bleeding that followed was very profuse, and from so many points that to control it by ligatures was found quite out of the question. Compression was equally ineffectual, though continued unremittingly for nearly an hour.



I now determined to adopt a new plan of procedure, one I had never before attempted, and for which I had no precedent. This I did for a twofold purpose : first, to restrain bleeding, which was now rapidly ex-

hausting my patient; secondly, to prevent, if possible, the seemingly inevitable inflammation naturally resulting from so extensively torn tissue, and which, by closing the incision in the usual way, could scarcely fail to prove fatal.

Both of these purposes were accomplished in a manner both simple and effectual. It consisted in closing up the abdomen in such a manner as to entirely *exclude* that portion of the parietes from which blood was flowing—literally turning it inside out, and then, with the bleeding surfaces wholly everted, bringing the parietal walls together at a point where the peritoneum was in a perfectly sound state.

To do this effectually, it was necessary to resort to what is termed the *quilled suture*; in the present case, however, substituting for quills two cylindrical pieces of wood, ten inches in length and a third of an inch in diameter. These, with the broad everted lips held firmly between them, were held in position by six through-and-through sutures.

To complete the operation, it only remained to bring together the everted lips, carefully adjusting them face to face, and finally securing their free edges with eight or ten superficial stitches. By this simple arrangement the abdominal cavity was not only made to correspond, as to capacity, more nearly to its natural condition, but it was also rendered comparatively secure against inflammation and all danger consequent upon future bleeding. In short, the case was made to resemble, to all intents and purposes, one of a perfectly uncomplicated and simple character, and consequently most favorable for recovery.

The result was in every respect most satisfactory. The operation was followed by no signs of inflammation or other disturbing circumstance. On the fourth day, the two pieces of wood were removed, and immediately the parts embraced between them began to separate; so that in proportion as the once overstretched tissues re-gained their wonted contractility, the broad seam occasioned by the above-described manner of closing the incision gradually lessened in width, and at the end of four weeks became almost entirely effaced.

I saw the patient again, a year after the operation, when she represented herself in perfectly good health. The abdomen was examined, and there was no peculiarity in the appearance of the cicatrix indicating that the case had in any respect been treated otherwise than in the usual way.

About one year ago, I had occasion to operate in a second case, in all essential particulars the same as the one just described.

Mrs. W., of Hyde Park, Mass., 27 years old; disease of three years' standing; health good till within the last three months; latterly, the rapid increase in size of tumor reminds her that medical treatment is of no avail, and that something further is necessary to get relief.

I was first consulted in the early part of February, 1866. I then found the abdomen occupied by a very large tumor, evidently ovarian, and of compound character—cystic and solid. During its development, there had been occasional attacks of severe pain in certain portions of the abdomen, indicating peritonitis. This fact, with other circumstances, justified the suspicion of adhesions. The patient was a good deal emaciated, and otherwise gave unmistakable evidence of much constitutional suffering. On the whole, I regarded the case rather unfavorable for an operation. The measure, however, was considered as fully justifiable, seeing that no relief could be reasonably looked for in any other way. The tumor was accordingly removed on the 11th of February, 1866, Drs. Miller, of Dorchester, and Bennett, of Hyde Park, assisting.

The details of this operation correspond so exactly with those of the one already described that it would only be a mere repetition to state them. In point of complications, the only difference between them was, that in the latter, besides the extensive and exceedingly firm adhesions of the tumor to anterior and lateral portions of the abdominal walls, there were also numerous omental attachments, the separation of which occasioned a very troublesome hæmorrhage. This was controlled, however, by ligatures, some of them cut short and allowed to remain inside, while others were brought out and confined at the upper angle of the wound.

As regards the portion of the parietal walls damaged by breaking through adhesions, they were dealt with precisely after the plan described in the foregoing case; so that upon the completion of the operation, the entire cavity of the abdomen, so far as the peritoneum was concerned, was put in a condition as absolutely perfect as if no adhesions had existed. The additional complication of omental adhesions rendered the case, of course, less promising as to the result, yet, even with this additional disadvantage, everything went on surprisingly well, not a single unpleasant symp-

tom occurring from the date of the operation till the cure was complete. The weight of the tumor was just fifty pounds, rather more than half of it solid. In this, as well as in the former case, the pedicle was secured outside with a clamp.

The plan of procedure as set forth in the preceding cases will of course be found specially applicable only to such cases as are of a particular character—to instances where the adhesions are limited to the anterior and lateral portions of the parietes, and where, too, from the size and duration of the tumor, the walls of the abdomen have been rendered comparatively thin, and sufficiently ample to allow of their being readily everted, and that, too, without strain or risk of diminishing the cavity of the abdomen to an undue degree.

I am well aware that the presence of adhesions, especially if they are comparatively limited in extent, and at the same time involve only the peritoneal lining of the abdomen, may not, as a general rule, be regarded as of any great importance in their bearing upon the chances of recovery. Such cases demand no special or extraordinary plan of treatment. So, too, with regard to certain other cases, where adhesions are more extensive and laceration of tissue of course correspondingly great. The process of cure in such instances has sometimes been quite as rapid and complete as if no complication existed.

In the two cases above given, it is not pretended that the difficulty to be overcome was in any respect peculiar; it was remarkable only in degree.

In one or two cases of similar character, the plan of treatment I pursued proved unsuccessful. I now determined to try a new course of action. The one I saw fit to adopt was followed, as has been shown, by most gratifying results. Theoretically viewed, I am sure it will commend itself as reasonable; practically, its advantages have been put beyond question.

Third case. Mrs. D., of Hampton, N. H., aged 56 years, mother of three children, the youngest 18 years old, always healthy, excepting that four years ago she had a severe attack of peritonitis; since then her health has been generally good, but for the tumor in the abdomen, which she says she has carried for full seventeen years. Slow of growth for many years, within the last ten or twelve months its increase has been rapid. It is now very large, and occasions great discomfort in various ways, especially from embarrassment in breathing, and difficulty of locomotion

occasioned by excessive œdema of lower limbs. Her physician, a sensible man, has not made matters worse by vain attempts to relieve her by debilitating medication. She is now resolved to submit to the removal of her disease by an operation. The tumor was accordingly removed on the 24th of June; present, Drs. Lewis, the attending physician, Tilton of Newburyport, Huse of Georgetown and Brown of Chester. The incision was commenced in the usual way, in the median line, between the umbilicus and pubes, and not more than three inches in length, it being my purpose first to make but a limited exposure of the cyst, and then draw off its contents through a canula, as is my usual habit. In this, however, I was defeated; the cyst and parietes in the line of incision proved to be blended by close adhesions, so that inadvertently the cyst was penetrated directly by the knife. The tumor was now thoroughly evacuated, and the incision further extended upward near to the sternum and downward to the pubes. In front and on each side the attachments were extensive and strong. In breaking through them a good deal of force was necessary, and consequently the lesion of tissue was very considerable. The bleeding was profuse, and from a surface not less than ten inches in diameter. The viscera were not involved. I had now before me precisely the same difficulties previously encountered in the two instances already described. In those two cases I had resorted to a new and peculiar plan of treatment, and with results so satisfactory I had no hesitation in adopting the same practice in the present case.

During the first and second day following the operation, the patient continued remarkably comfortable, no suffering of any kind; indeed, every symptom was as favorable as could be desired. On the third day, there was beginning to be felt a sense of tightness across the upper portion of the abdomen, indicating, of course, a degree of tympanitis. Instant relief was given by cutting the sutures and removing the clamps of wood, thus allowing the parts confined between them gradually to separate. The distention went on increasing, however, to a very considerable degree, and in twenty-four hours the broad seam, four inches in breadth and extending from sternum to pubes, entirely disappeared. The appearance of the abdomen at this time was precisely that of a patient suffering from severe peritonitis. Other and more positive symptoms, however, were wanting. A pulse not exceeding 88 or 90,

a clean tongue, absence of thirst, quiet and refreshing sleep, and a desire for food, gave assurance that, on the whole, the case was doing well. On the fifth day, the bowels were moved by means of an enema administered through a rectal tube. In connection with a pretty free fecal discharge, there was also an escape of a large amount of flatus; following this, there was a rapid subsidence of tympanitis, and in less than twelve hours it was wholly gone.

Excepting the occurrence of an attack of indigestion, brought on by a too free indulgence of the appetite, the patient has been ever since regularly improving; and now that three weeks have elapsed since the operation, there is every reason to expect an early and complete recovery. The tumor was cystic and solid, weighing sixty-five pounds.

Fourth case. Mrs. K., of Haverhill, Ms., 23 years of age, married five years, and always healthy till the birth of her only child, now four years since. At this time she first noticed some enlargement of the abdomen, but not enough to lead her to a suspicion of anything of serious importance. The enlargement, however, went on slowly increasing till March of the present year. She then consulted her physician, who at once informed her that she had ovarian dropsy. I first saw her the same month; she was then suffering greatly from distended abdomen, and also in various other ways common in such cases. An operation had already been decided on, and the decision would have been acted upon at once, had there not been reason to suspect the coexistence of pregnancy. Notwithstanding the possible harmlessness of this complication, previous experience had taught me that its bearing upon the result of surgical interference was a matter of no trifling importance. For the purpose, therefore, of temporary relief, the patient was tapped, and thirty-six pounds of albuminous fluid drawn off from a single cyst. Two days after, measures were taken to procure abortion. They were effectual, though attended with some delay and considerable suffering. Pregnancy had existed about four months. Peritonitis followed the abortion, and the patient was brought very low in consequence; meantime the cyst refilled rapidly. Before convalescence was sufficiently established to justify a more severe operation, another tapping became necessary. After this, notwithstanding a still more rapid re-accumulation in the cyst, there was a marked improvement in the general health, and in three weeks the pa-

tient submitted to the final operation of extirpation.

The manner of operating and the special features of this case need not be specifically stated. It was only another striking instance of extensive and firm adhesions in front and on either side, between the cyst and parietes, in part of recent origin, and consequent upon peritonitis following abortion; mainly, however, they were of long standing and very strong, extending upward at one point so as to involve a portion of the diaphragm. The pedicle was unusually broad and thick; also too short to allow the use of the clamp. It was therefore tied in two parts before separating it from the cyst, and the stump drawn forward and "pocketed" between the lips of the incision. In dealing with the difficulty arising from the adhesions, I pursued the same general plan which has been set forth in the preceding cases. In detail, the only difference consisted in omitting the clamp of wood, and confining the everted parts with sutures merely. The bleeding portion of the parietes being drawn forward and held snugly between the hands of an assistant, the same were transfixed by a series of *through-and-through* stitches, an inch apart, and on a level with the line of incision. These stitches were passed through double, so that the loop on one side was made to embrace a miniature roller of cotton cloth, while the free ends were tied tightly over a similar roller on the opposite side. Thus the abdomen was closed with the torn and bleeding surfaces of the parietes entirely excluded, excepting, of course, the slight lesion of the diaphragm, which could not be reached.

Other dressings were applied in the usual way, care being taken that there should be a sufficient *levelling up* on either side of the ridge along the median line, to prevent undue pressure from the application of adhesive strips and bandage.

A steady, but not wholly uninterrupted convalescence followed this operation. At the end of two weeks the patient was seized with a pain in the abdomen, followed by vomiting—owing, doubtless, to indigestion merely. Immediately following this attack there appeared in the line of the incision several small abscesses. These, for a time, occasioned considerable discomfort, but not sufficient to seriously interfere with a steady progress toward recovery. There is every reason to believe that in due time the cure will be complete.

[To be concluded.]

CUCURBITA PEPO AS A VERMIFUGE.

MR. EDITOR.—The success which has attended the use of the seeds of the *Cucurbita Pepo* as a vermifuge for the expulsion of *tænia* has placed this remedy indisputably in the list of specifics. I desire to add another to the numerous cases already reported of successful treatment by this means, as every additional confirmation of the practical utility of any remedial agent is, in my judgment, a contribution to the triumphs of medical science over the "ills which flesh is heir to." The patient, in this instance, had expelled, at intervals for the past two years, segments of *tænia*, but had not suffered during the time any constitutional disturbance, except obstinate and persistent itching of the anus and nose. There was also, perhaps, an inordinate craving for food in the morning. He had been subjected to treatment, without success, under the direction of several physicians, regular and irregular. Myself and partner, Dr. Lash, having been applied to for treatment in the case, we decided to make use of the method introduced into this country by Dr. J. S. Jones, of Boston. The emulsion of seeds, consisting of about eight ounces, was taken in the morning fasting, and followed soon after by *ol. ricini*. The result was, the expulsion of a *tænia* fifteen feet in length. The segments were close and compact, becoming more narrow each way, proceeding from the point of greatest breadth. There were no appearances of vitality, such as indicated life in the segments which had previously been voided with the ordinary excretions. Not having a glass at hand, we were unable to determine the existence of the head, but a subsequent administration of the emulsion not being followed by any portion of the *tænia*, fully convinced us of its entire expulsion.

The anthelmintic value of this remedy against this species of human parasite I believe to be fully established beyond a question of doubt. D. W. HERSHEY.

Nebraska City, Neb., May 20, 1868.

REAL AND APPARENT DEATH.—The Marquis of Ourches, a French nobieman, has presented £1000 to the Academy of Medicine of Paris, for a prize to the discoverer of an accurate means of distinguishing between real and apparent death. He presents this very liberal prize on the condition that the means of diagnosis shall be open to non-medical persons, and that the sum be reduced to £200, if none but the profession can use it.—*Medical Press and Circular*.

Hospital Reports.

BOSTON CITY HOSPITAL.

Record of some of the more important Operations for the Mouth of June, 1868. (Continued.) Reported by F. W. DRAFER, House-Surgeon.

CASE IX.—*Chronic Disease of Knee; Amputation of Thigh.* (Service of Dr. DERBY.)

—P. M., aged 43, a shoe-maker, had complained of trouble about the knee during the eighteen months previous to his entrance to hospital. There had been pain, distention of the joint and a general and increasing debility. The habits of the man were intemperate, and his constitution was, at the best, but a feeble one. At the time of entrance, the affected joint was fourteen and a half inches in circumference, the skin being fully distended, and the patella floating. Motion gave much pain, and the preferred position was semiflexion. Absolute rest was enjoined, and tincture of iodine was applied locally, a remedy he had hitherto escaped.

In a week, there was some apparent relief of the symptoms; but at that time there was observed an obscurely fluctuating swelling in the calf of the leg below the diseased knee. It was incised, and six ounces of dark, sanguineous, thin and odorless pus were evacuated. No connection with the effusion into the knee was determined. The patient reported that he had noticed a slight swelling in the calf during the last six months, but it had never given any disturbance. In two days the abscess had refilled; it was again incised, this time more freely, the pus being now very offensive. From this time, the patient began to decline. The knee-joint was still distended, and there was crackling on pressure. There were no chills or vomiting.

Amputation of the thigh was proposed as the only probable means of saving life. It was performed in the middle third. The shock was unusually marked, and the patient required stimulation. Subsequently, there were no unusual symptoms, until the third day, when a well-marked and prolonged chill occurred. The discharge from the wound was thin, dark and offensive. The patient was evidently sinking, and all efforts at stimulation and support proving unavailing, he died on the fifth day after the operation.

An examination of the diseased knee, immediately after the amputation, discovered a condition fully justifying the operation. The cavity of the knee was filled with fetid,

decomposed pus, and all the articular cartilages were disintegrated. The extremities of the bones were carious.

CASE X.—*Cancer of Antrum; Extirpation of Upper Jaw.* (Service of Dr. DERBY.)—

S. P., a widow, aged 50, a washerwoman by occupation, had complained for six months of distressing neuralgia confined to the right side of the head and face, and especially severe about the right ear. Medication failed to relieve it. Shortly after her entrance to the hospital, a slight protuberance in the palate was discovered, situated on the right side just within the alveolar border. The right nostril had been obstructed during the previous month. The two sides of the face were symmetrical, but a tender point was noticed just outside and above the right ala. No tumor could be felt in the posterior palatine region, and the posterior nares were free. The flow of saliva was unnaturally profuse. There was no epiphora, and there had been no epistaxis.

During the three weeks succeeding her entrance, attention was devoted to alleviating the neuralgic symptoms, and to the support of the system in general. The tumor in the palate enlarged steadily, and became more tender. All the symptoms indicated malignant disease of the antrum, and the removal of the bone was determined upon.

A primary incision was made, upward, along the commissure of the upper lip, and outward around the ala, and, again, upward, to within half an inch of the inner canthus. The flaps were dissected on either side, so as to expose, on one side, the lower meatus, and on the other, the body of the upper jaw as far as its articulation with the malar bone. The anterior wall of the antrum, thus exposed, presented a nodule as large as a filbert. With a Hey's saw, a section of the bone was made, extending from the posterior tuberosity, forward, to the middle meatus of the nose. The palate process was divided with bone forceps, and the soft tissues being divided with a scalpel in the line of the articulation with the palate bone, the section of bone was torn away by means of "lion" forceps, and the extent of the disease was thus exposed. The antrum was filled with soft cancerous growth, and the turbinated bones were also involved. The disease was found to extend upward toward the frontal sinuses, outward under the orbital floor, and backward to the pterygoid processes. It was deemed advisable, on this account, to remove portions of the malar and nasal

bones. The primary incision was accordingly met at its termination near the eye by another at right angles, extending, just below the lower lid, outward four inches. This flap having been lifted, section of the zygoma and of the orbital process was made by a saw. The bone was separated from its attachments, not without some difficulty, the progress of the disease having rendered the bony tissues fragile. The hæmorrhage was so inconsiderable as to require no ligatures. The flaps were at once apposed and held by silk sutures. There was no noteworthy shock. The external wound healed with very satisfactory rapidity, union by the first intention being secured, except at one point. The cavity of the wound, internally, was syringed frequently with diluted liquor soda chlorinatæ, and granulations were healthy. On the fourth day, the sutures were removed. There were still some of the neuralgic pains remaining, confined chiefly to the supraorbital and temporal regions. The external deformity was notably slight, although articulation was much impaired.

In the third week after the operation, œdema of the lower lid of the affected side manifested itself, and was persistent. In the cavity of the mouth, along the edge of the hard palate, the granulations had assumed an exuberant and anæmic appearance, much resembling the original diseased growth, and indicating its recurrence. The neuralgic pains continued, requiring the administration of morphia. At the end of the fourth week she was discharged, relief from her former symptoms having been obtained only in moderate degree.

CASE XI.—*Severe lacerated Wound of the Foot, with Fracture of the Metatarsal Bones; Amputation of the Foot; Tetanus; Death.* (Service of Dr. DERBY.)—S. J. W., an unmarried female, aged 17, in perfect health, was engaged in her occupation as paper-finisher, when, by the bursting of a large steam cylinder, she was injured as follows:—Her left foot was struck by a fragment of the iron pipe just in front of the external malleolus. The tarsal and metatarsal regions were extensively crushed and disintegrated, the skin on the dorsum of the foot having been dissected, exposing the fragments of the bones forming the arch of the foot. The ankle-joint was not injured. The hæmorrhage attending the injury was considerable, and the shock was well marked. The patient entered the hospital within an hour after the accident. The foot was amputated by Chopart's method, modified, however, by the sawing off of the ar-

ticular head of the astragalus and os calcis. The long flap from the sole contained many small arteries, which bled quite freely, and required the application of twelve ligatures. The wound was at once closed, its edges being apposed by silk sutures placed half an inch apart.

The constitutional disturbance following the operation and the recovery from ether, was quite severe. During the night and day following there was much pain; pulse 140, skin dry, and tongue parched. There was persistent nausea during the first twenty-four hours. Sherry wine and beef tea were administered in small amounts, frequently repeated.

Subsequently, the case progressed satisfactorily during the following fifteen days. A small portion only of the extremity of the flap sloughed, leaving healthy granulations beneath. The strength of the patient was supported, a tolerably good appetite enabling her to take and retain nourishing diet. There was, however, obstinate constipation, and, in the stump, there was persistent pain, two points in the granulations being especially tender.

After this interval of fifteen days, symptoms of tetanus began to manifest themselves. The mouth was opened with some difficulty, and the muscles of the neck on the same side with the injured foot were rigid. In twenty-four hours, spasms began to manifest themselves, slight at first and confined to the lower extremities, but, shortly, aggravated, until the whole body was involved; the paroxysms giving the patient much distress. The pulse, previously rapid, now rose to 108-120. The muscles of the jaw became still farther involved, so that the teeth were separated with the greatest difficulty; the expression of the face was, in consequence, painfully altered. Liquid food was administered in only small quantities, on account of the partial inability to swallow. With each succeeding day the symptoms became more grave and distressing, only temporary relief being obtained from treatment.

As soon as the first indications of the disease appeared, all the dressings of the stump were omitted, and an opiate lotion substituted. To control, in a measure, the painful spasms of the injured limb, a ham-splint was applied, with considerable relief. The bowels were opened freely. Morphia was administered subcutaneously, in half grain doses, every six hours; and this treatment was continued to the end. On the third day, the patient was etherized, and the tendo-Achillis was divided. Beef-tea enemata were given.

In spite of these palliative measures, the disease steadily developed. Well-marked opisthotonos succeeded. Thirst was excessive. The surface of the body was very dry, and its heat extreme. On the seventh day, delirium began to manifest itself for the first time, and the mental and physical exhaustion was obviously increasing, the continued and distressing spasms affording not a moment of rest.

Early in the morning of the eighth day, the respiration became, for the first time, involved, from spasm of the diaphragm. There was frothing at the mouth, and inspirations were taken spasmodically, with a hissing sound as the air passed between the closed teeth. The pupils were widely dilated. The whole body was perfectly rigid, and its temperature was very high. Preparations were at once made to administer ether, but before they were completed, the patient died, the symptoms continuing unabated to the end. No autopsy was allowed.

It should be remarked that the tetanic symptoms began to appear very soon after the commencement of the extremely hot weather in July last, and that the exacerbation of the disease, during which death occurred, was also during the second heated term in that month. Whether these stand in the relation of cause and effect, or of simple coincidence, is a question of interest. It would seem, however, that this unusual temperature might have aggravated other causes, of which the severity of the injury at the outset, the irritation of the nervous extremities in the stump, and the obstinate constipation, were, perhaps, the most obvious.

LONDON HOSPITAL WORK.—According to hospital statistics lately published in the *Lancet*, it appears that fourteen metropolitan hospitals, to say nothing of the numerous smaller and special institutions in existence, give annual relief to over 33,000 in-patients, and to more than 550,000 out-patients. Or, taking the gross total, it will be seen that nearly a fifth of the three million inhabitants of London received relief from public charity, supposing the same patient to be relieved but once in the year. With regard to the out-patients, it appears that their number at each hospital ranges from 10,000 to 20,000 per annum, depending both upon the locality of the institution and the strictness with which governors' orders are required.—*Med. Record*.

Bibliographical Notices.

Odontalgia, commonly called Toothache; its Causes, Prevention and Cure. By S. PARSONS SHAW. Philadelphia: J. B. Lippincott & Co. 1868. 12mo. Pp. 258.

THIS little book, without claiming to exhaust the subject of toothache, is a very complete essay on the causes, prevention and cure of that so common an ailment. The author is evidently at home with his subject, and gives many practical hints which cannot fail to be useful to the general practitioner. Perhaps he is not entirely exempt from that almost universal failing of medical writers, i. e., the tendency to ride a hobby, and if such is the case, his hobby certainly is, that almost all cases of facial neuralgia are due to defective teeth.

He considers that toothache is due to one of two lesions, odontitis or periodontitis, the former being an inflammation of the tooth-pulp, the latter an inflammation of the periosteum which surrounds the fang, and which lies between the cementum and the alveolar process. Simple and clear means of making a differential diagnosis between these two morbid conditions are given, and the importance of not confounding them is shown by the fact that their appropriate treatment is different. He claims that quinine acts as a specific for the severe pain of periodontitis, although it does not give permanent relief. It may not be uninteresting in this connection to state that Oppolzer's most common treatment for facial neuralgia is quinine. One important fact which he insists upon is, that by the extraction of the first teeth the development of the jaw is interfered with, and the second teeth will be crowded. We can hardly agree with him when, in speaking of emollients, he puts *hot mustard* into that class on the same footing with linseed and bread and milk.

On the whole, the book is worth reading, and will undoubtedly give some new ideas to any one who has not made a special study of dentistry.

F. B. G.

On Diseases of the Skin; A System of Cutaneous Medicine. By ERASMUS WILSON, F.R.S. Seventh American from the Sixth Revised London Edition. With twenty Plates and Illustrations on Wood. Philadelphia: H. C. Lea. 1868. 8vo. Pp. 808.

It can hardly be necessary to do more than call the reader's attention to a *seventh*

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edition of a standard work. In this edition, the colored plates on syphilis have been added by the American publisher. The plainness, precision and care evinced by Mr. Wilson are well known. Which-ever side we may espouse in the interne-cine war of technicalities and abstractions which rages among dermatologists, we must admit the candor of our author in his Preface, where he expresses himself as follows:—

"We venture to remark, that if an acute and friendly critic should discover any difference between our present opinions and those announced in former editions, we have only to observe, that science and knowledge are progressive, and that we have done our best to move onward with the times."

Lessons in Physical Diagnosis. By ALFRED L. LOOMIS, M.D., Professor of the Institutes and Practice of Medicine in the University of New York, &c. New York: Robert M. DeWitt. 1858. 8vo. Pp. 155.

THIS little monograph, we should think, might prove quite useful to the student and junior practitioner. It is illustrated with a number of diagrams of regions; those on tumors of the spleen and ovary being new to us.

THE FALL OF LEAVES.—M. Trécul and others have been engaged in investigating the cause of the fall of leaves, and their researches would seem to point to the conclusion, that in many plants a phenomenon occurs just before the fall of the leaf, which is not unlike the process which accompanies the shedding of horns in animals. It consists in the obstruction of the proper vessels at the base of the petiole or leaf-stalk. This obstruction is caused by the multiplication of cells, which first occurs in the parietes of the vessels. The cells increase and multiply, till at last the vessels are completely choked up in the neighborhood of the insertion of the leaf, and thus a differentiated plane is formed, across which the leaf-stalk breaks, and the leaf accordingly falls.—*Exchange.*

IN consideration of the numerous victims of homœopathic treatment, a decree of the Emperor of Russia prohibits the practice of homœopathy in the entire territories of Russian America.—*Union Médicale.*

Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 17, 1868.

CONSERVATIVE SURGERY.

THE power of nature to repair the most frightful injuries of the limbs has never been so remarkably exemplified as in the series of traumatic cases contained in the book* we have before us; a work, the most noteworthy of its class, that has appeared since the essay on "Compound and Complicated Fractures," by the late Dr. Wm. J. Walker.

The heavy manufactories, mining pursuits and railroads of Pittsburgh, render its mechanics peculiarly liable to severe crushing and lacerated wounds. Of these we have 66 cases detailed, of which 47 recovered and 19 died. But it is worthy of comment that *all* the successful cases were treated by the author's method; and all the unsuccessful ones by other measures which he reprobates; and while we do not in the least doubt the sincerity of the writer and the truth of his reports, we could wish he had reported some unsuccessful cases of his own, if such existed. We conclude they did not; and that where he could apply his mode of surgical treatment early to a case of injury it uniformly turned out well. Attention also should be drawn to the fact that there are no cases of injury of the femur given, but only of the lower leg and of the upper extremity.

It seems to us that the exact condition of the circulation and of sensation and motion—of the state of the main arteries and nerves—might have been given in each case.

The style of the author is hasty, careless and sometimes ambiguous; and there is something of an air of *bravura* in the so frequent and marked contrasts he draws between the proceedings of his professional brethren and his own; and yet we recognize a feeling of sincerity and conviction about it, which teaches us that the writer

is both honest and earnest in his belief and acts.

We like the work; we believe in many of its proposals for treatment; we have carried out partially, and often thought of such means in hospital practice ourselves; and to place it in juxtaposition with the justly celebrated monograph of Dr. Walker is as high praise as we should know how to accord it. The two authors much resemble each other in manner and matter. The views of Dr. Walker are carried out, and carried a step further by Dr. Walter. The imperative necessity of free incisions; of division of fasciæ, and of *débridement*, are insisted on by both. How much, alas! have the precepts of Dr. Walker been neglected since his day!

We would make only a single remark more, and then allow our author to speak for himself. It is that the fact must never be lost sight of that these cases were treated either at home, or in a private infirmary, and not subjected to the deleterious influences of a general hospital.

After alluding to the frequent fatality of bad fractures when left to themselves, and even when amputated, Dr. Walter, in his introductory remarks, goes on to explain his views, thus:—

"To avert these direful results, and especially that of pyæmia, the scourge of surgery—more to be dreaded than any other affection following in the train of traumatic injuries—which has decimated the wards of private and public institutions, and still continues to do so, and to elevate conservatism to the proud position—implied by its name—that of *preserving limb and life*, I offer a practice, hitherto not promulgated, which fully and truly sustains conservatism, and robs it of its dangers.

"Trusting, as the judicious surgeon ever should, in Nature's unbounded aid, yet cases like these under consideration, withdrawn, as they are, to a great extent, from her motherly care and protection by the force of injury, require his prompt and most energetic resources, in order to stay death, not only to limb, but to life also. These resources I propose to supply by a conservative practice, rational, and uniformly successful, which cannot be claimed by any treatment hitherto pursued under that name. If successful, *conservatism* is then

* Conservative Surgery in its General and Successful Adaptation in Cases of severe Traumatic Injuries of the Limbs, with a Report of Cases. By ALBERT G. WALTER, M.D. Pittsburgh, Pa. W. G. Johnston & Co.

to be practised in *all injuries* of a *grave character*, in preference to immediate amputation.

"Limiting my remarks to the treatment of injured limbs (with main arterial and nervous trunks intact), although not hopelessly mangled, such as are produced by the wheels of railroad cars, or heavy machinery, by which the bones are fractured and comminuted, and the soft tissues lacerated or crushed, it is of the utmost importance, in these cases, if conservatism be attempted, that, *first* of all, *free vent* be given, by *long and deep incisions*, for the escape of effused blood confined under the fascia, between muscles, and in the cellular tissue of the skin, and that all attempts to bring the soft parts together, when lacerated or cut, by stitches, be *strictly and absolutely discarded*.

"*Free, deep and early incisions* (the more timely made the better), are, I aver, the *only* measures deserving of the name *conservative*, in injuries of this character. Next to them, *warmth*, by warm water dressings (medicated or simple), or by poultices, promptly and assiduously applied, is claimed as an important adjunct. Under its genial and soothing influence, the feeble vitality of crushed and mangled limbs will be roused, local arterial circulation excited and revivification induced, venous congestion relieved, elimination promoted, and suppuration, with cicatrization, expedited. Cold applications, under these circumstances, cannot fail to extinguish the quivering sparks of life which are left in the member, and hasten its destruction."

The following is an exact rescript of the views of Dr. Wm. J. Walker:—

"Many, very many, are the limbs and lives that might have been saved, if due weight had been given to the incontestable fact, that the *unyielding nature of the fascia*, which envelops the muscles and supports them for the performance of their functions, is the *main source of danger* to the injured limb, and that free division of aponeurotic structures, in all severe injuries, occasioned either by shot or any other crushing power, is the *only safeguard* to limb and life of the wounded."

Accordingly, we find our author dealing with the most frightfully contused and lacerated limbs by just such incisions as he would employ in phlegmonous erysipelas, or diffuse cellulitis. Leeches he does not advocate, since they remove living and circulating, and not effused blood.

Among the numerous very remarkable recoveries we instance the following, as the most extraordinary.

"Frank M'Govern, laborer, of Lawrenceville, Allegheny Co., Penn., aged forty-five years, of strong constitution, vigorous health, nervo-sanguineous temperament and abstemious habits, on September 20th, 1866, while crossing one of the railroads upon which an engine was standing, blowing off steam, was struck by the tender of another, backing toward him, and fell on the track. He was removed, in an insensible condition, to his home near by, where he recovered from the stupor in half an hour after. The injuries to his face and limb, however, were so grave as to make restoration extremely doubtful. Seven hours after the accident I was called in, and found his condition as follows:—The face was greatly chafed, enormously swollen, and of a purple color, the eyelids being extensively suggillated and nearly closed. The ossa nasi were broken, comminuted, separated from the nasal process of the frontal bone, and driven backwards beneath the glabella for one fourth of an inch, the skin of the bridge of the nose being lacerated into shreds. The left upper maxillary bone was also fractured and displaced, the fracture extending upward into the lower rim of the orbit, near to the inner canthus, and downward through the left alveolar process, which was disjoined from the right one, without displacement. Bleeding from the nose and mouth was considerable. The left leg showed extensive and frightful destruction, being fractured and lacerated to an extent precluding all hope of recovery. The limb was greatly swollen, cold, exposed in a pool of blood, and still bleeding, with the foot and the lower part of the crus below the fracture semi-rotated outward, and bent to a right angle. There was a long and deep wound occupying its upper half, gaping and freely bleeding, measuring eight inches in a horizontal, and six in a vertical direction, with jagged and lacerated edges, and extending almost around the entire limb, not more than four inches of muscular tissue and skin along the posterior face of the limb remaining unsevered. The tibia was obliquely fractured three inches below the knee-joint, with the periosteum, muscles, and interosseous ligament stripped off the broken parts for a great distance; the ligamentum interosseum being detached as high as the tibio-fibular articulation, which was opened. The broken extremities protruded several inches through the wound. The head of

the tibia was luxated inward and backward, and that of the fibula outward—the shaft of the latter being broken in its upper third. The wound, exposed bones, and entire limb, were covered with street dirt, ground into the bleeding tissues. The left arm was greatly bruised, ecchymosed and swollen; the os humeri, however, not being fractured.”

Who can help agreeing with Dr. Walter in saying:—

“If a limb thus mangled, and almost torn off the body by a powerful force, in an aged person—the knee-joint dislocated, fibula diastased, both bones broken, with the extremities of the tibia bereft of periosteum and protruding through a frightful wound, no pulse in either tibial artery being perceptible—is seen to recover, what prospect will there be for the amputating surgeon in the future, with conservatism thus determinedly staying his hands?”

Our author disagrees entirely with the modern views of septic poisoning of Lister, Nélaton and Maissonneuve, who sedulously exclude the air from wounds, and believes that it does no harm whatever.

“The apprehension, too, of delaying reunion of the fractured bone by converting a simple fracture into a compound one, by means of free incision, which might be urged against it, does not stand the test of experience—the theory of the injurious effect of atmospheric air, when admitted to serous cavities, and that of fractured bones of the human body, although supported by authorities, even of a late date, still being considered *sub judice*.

“However the issue of the question of the supposed injurious effect of atmospheric air will eventually be decided, in cases of fractures of the limbs at least—made compound either by accident or design—it will be conceded, that it is *not* contact of pure air with the exposed surfaces of a bone that produces necrosis of its fractured extremities, as the necessary result, but the devitalization of the bony fragments, by retraction of the external and internal periosteum, bruised and lacerated by external agents. What harm, then, can follow an incision over the seat of the fracture? Moreover, the effused blood, if surrounding the broken fragments in considerable quantity, is known to undergo decomposition, and excite suppuration, with results more serious than that of delayed bony reparation. The knife, therefore, is the only conservative weapon—the sooner used, in such conditions, the better.

He even would not hesitate to convert a simple into a compound fracture, if he deemed the swelling and extravasation required incisions.

“The injury which this limb had received by being crushed across an iron track with the wheel of a loaded street car, certainly appeared serious enough to cause apprehension in the mind of the medical man who dressed it, that amputation would very soon be required. There is no doubt that this *would* have been demanded before many days, as the treatment to which it had been subjected at his hands, by tight constriction with a roller, was but calculated to induce speedy gangrene. To avert this serious result appeared, therefore, of the utmost importance. The leg was not only fractured, but bruised and greatly swollen in consequence of extravasated blood under the fascia superficialis cruris, which prevented a closer examination of the fracture. Yet it was uncomplicated with breach of surface, excepting the punctured wound above the inner malleolus. Nevertheless, it was thought highly expedient, considering the force which had produced it, to convert the fracture—plain apparently at first, though of a serious nature—at once into a *compound* one, by free division of the integument and both fasciæ in front of the limb, for the purpose of liberating the effused blood which occasioned tension and threatened gangrene. Thus by adding another injury, inflicted by the knife, to the original one, the condition of the latter, instead of being aggravated, as is generally feared, was, on the contrary, improved by being reduced to the state of the most simple fracture. Rapid union, without pain, undue suppuration, or any other unfavorable symptom, amply sustained this assertion. Why, then, dread a *compound* fracture, thus made by accident or design, as the very condition of its being compound, and thereby keeping the wound open, has been the means of saving this limb, and many others, from serious consequences not otherwise to be prevented.”

The process of enlarging gun-shot wounds by *débridement*, as all know, has passed into disuse; too much so, we are inclined to think, in some cases. As Dr. Walter does not treat of gun-shot wounds, he only alludes to the French method, as parallel to what he pursues in contused and lacerated ones.

To let out all fluids extravasated; to relieve tension at any cost; to admit air fear-

lessly; to resect the extremities of oblique fractures; to promote warmth by poultices, rather than to reduce temperature by irrigation; to get the patient home; to swing the leg in tin splints, and to give great care to extension after resection, comprise the chief points of this remarkable pamphlet.

We regret our space will not allow us to give fuller extracts and comments. We trust we have said enough to induce many of our readers to consult the book for themselves. As another great step towards the conservation of limbs, we hail it with pleasure. All, in these days, must agree with the author's motto—"Præstat Naturæ voce doceri, quam ingenio suo sapere."

TREATMENT OF ACUTE RHEUMATISM. *Mr. Editor*.—Your JOURNAL of Sept. 10th contains an article on the treatment of acute rheumatism, by N. J. Butler, emanating from Dr. Adrien, &c., which is explainable on a different principle from any property peculiar to valerian; one half pint of white beans in the bath would render as much service as the valerian. I think the principle by which relief is afforded is entirely overlooked. The rationale is readily understood when we refer to the etiology and pathology of acute rheumatism. It is admitted that there is a *materies morbi* in the blood peculiar to arthritic patients, and during an attack, the fibrous tissue about the joints being more dense, circulation of the *materies morbi* is impeded and becomes a cause of local irritation, thus producing an inflammatory condition of the joints. Immersion in the warm bath affords relief by producing an increased circulation more equally over the entire surface, thus relieving the local congestion, and consequently the pain. The flannel-blanket treatment at St. Mary's involves the same principle. Twelve years ago, I treated severe acute rheumatism with the warm bath minus the valerian, with a success worthy of much praise; also, whenever the "inflammation remained refractory in any of the joints," I applied ice-water freely. The danger of metastasis is not to be feared by cooling the joints, but by lowering the general circulation. I have also treated severe conjunctivitis with hot sitz baths, and obtained immediate relief, when all other known remedies had failed.

It is better, if possible, to keep some principle in view in the treatment of disease, and the use of the bath is so plain, it seems like progressing backward to attribute any medicinal effect to the decoction of valerian thus applied.

W. R. DUNHAM, M.D.

Westmoreland, N. H., Sept. 15, 1868.

THE USE OF THE MUSCLES OF THE UVULA IN DEGLUTITION. By THOMAS BRIAN GUNNING.

My object at this time is to show the most important use or function, of the muscles of the Uvula; not to explain the mechanism of deglutition fully.

The opinions of physiologists have differed materially in regard to the use of these muscles in deglutition, but no correct or satisfactory explanation has been given of them by any one. The following quotation may be taken as fairly representing what is now believed of them. "The Azygos Uvulae is the small muscle, consisting of two fasciculi, one on either side, which forms the fleshy portion of the uvula. It has no very marked or important function in deglutition." My own views are as follows:—

When the food has passed into the upper part of the pharynx, it is shut in by a band or welt, consisting of the forward portion of the soft palate, continued down the sides, by the anterior pillars. The upper portion is formed by the action of the *Tensores Palati* muscles drawing their aponeuroses tight, and the *Palato-glossi* coming into action, and continuing the curve down, on each side of the tongue, at the same time assisting to draw the latter up against this arched band, or welt, by which the food is kept back. It should be understood that the upper part of this arch is formed by the aponeurosis, at some distance in front of the uvula, so that the part of the soft palate behind the welt is left free. Through the middle of this, the *Azygos Uvulae* muscles pass to the uvula, in the centre of the back border, or arch, formed by the *Palato-pharyngeus* curving down on each side, and known as the posterior pillars of the soft palate. These two pairs of muscles are inactive, as the *Levatores Palati* have drawn the soft palate up behind, and closed the passage to the posterior nares, while the food is shut in at the front, as before described. At the instant this is accomplished, the *Palato-pharyngei* act, and come together behind; the *Levatores palati* relax; and the *Azygos Uvulae* muscles come strongly into action, and draw the uvula and the origins of the *Palato-pharyngei* rapidly forward. The *Azygos Uvulae* muscles, which pass from the spine of the hard palate to the uvula, are at this time held down to the tongue, by the welt or band formed by the aponeurosis before mentioned, consequently they now, in acting, draw the origins of the *Palato-pharyngei* down to, and forward along the upper surface of the tongue; and as the insertions of these muscles extend down around the sides and back

of the pharynx (crossing each other behind) they, in acting at this time, form a circular layer of muscular fibres which converge from the circumference of the sides, and back of the pharynx, across to the insertion of the Azygos Uvulae muscles. In other words, a layer of muscular fibres spreads out, from each side, meets in the centre, behind the food, and the point to which they converge, being drawn down to, and forward on a level with the upper surface of the tongue, the food is pressed down the pharynx. Again, by this arrangement of the parts, a muscular arch draws down close against the upper surface of the tongue, to keep the food back; while the remainder of the soft palate shuts off the posterior nares. This last then changes into a muscular curtain, behind, and then into a roof over the food, and as the circumference of this roof is down on the face of the middle and inferior constrictor muscles, and the origin of the Azygos Uvulae muscles is on the apex of the spine of the hard palate, there is a plane of muscles, contracting over the food, and coming down to the line of their attachment behind, and the level of the tongue in front. If the finger is placed along the tongue, until its end touches the centre of the welt formed to keep the food back in the pharynx, the Azygos Uvulae muscles may be felt tightening, as the saliva is swallowed; and if the end of the finger is passed forward under the welt, on swallowing, the uvula will pass forward, and turn up, so much, that its back will be felt against the back of the finger, if the latter is held just low enough. The Azygos Uvulae muscles always act in deglutition, whether solid or liquid food, or merely the saliva is swallowed. It is thus shown that the *Tensores Palati* muscles and the *Palatoglossi* act in concert, to form the arched band which shuts down against the tongue, and that the *Palato-pharyngei* are not associated with the *Palatoglossi* in constricting the isthmus of the fauces. The *Palato-pharyngei*, however, act in concert with the Azygos Uvulae, to press the food down the pharynx. In doing this the Azygos Uvulae (in converting the screen, or curtain formed by the closing of the Pharyngei behind the food, into a roof or cover, by drawing their origins at the uvula downward and forward) make the Pharyngei muscles act as if they were prolonged to the spine of the hard palate. Another important feature is that the Azygos Uvulae muscles are the direct antagonists of the *Levatores-Palati*. The influence of this antagonism will not, however, be dwelt upon at this time.

The foregoing explanations show that every muscle of the soft palate is active in deglutition, and that the food is effectually controlled without unreasonable action on the part of any muscle such as that generally imputed to the Superior Constrictor, which cannot act in deglutition, as supposed, its attachments making it impossible that it can press the food down the pharynx. —*American Journal of Dental Science.*

PHYSIOLOGICAL EFFECTS OF BROMIDE OF POTASSIUM.—MM. Damourette and Pelvet have investigated the physiological effects of the bromide of potassium. Their experiments were made upon frogs, rabbits and birds (sparrows, pigeons and magpies). The bromide was introduced into the stomach, applied to the external surface and (most commonly) thrown into the cellular tissue by subcutaneous injection. Their experiments show that the action of the bromide is general, and that it extends throughout the nervous and muscular systems; that it is an anæsthetic as well of the centres and nervous cords as of the muscular and tegumentary surfaces; that it is acynetic as well of the muscles of the digestive, urinary and respiratory systems as of the voluntary muscles. In conclusion as the result of their experiments, they state: 1st, the effects of the bromide are always direct, that is, due to the contact of the agent with the tissues either at the point to which it is applied, or upon the whole economy, throughout which it is carried by the circulation, or finally upon the organs of elimination.

The increased amount of the bromide of potassium at the point of application and on the surfaces of elimination, explains the earliness and the greater intensity of its action at these points. It explains the success of the bromide in hyperæmia, hyperæsthesia, and spasmodic affections of the digestive and respiratory apparatus and of the genito-urinary organs, without the necessity of calling to our aid elective action, or affinity of the bromide for the mucous membranes of these organs, other than that which results from their situation on the path of entrance or of exit of the modifying substance. It explains the universality of the nervous and vascular sedation, without obliging us to localize the effects of the bromide upon the spinal marrow, like M. Laborde, or upon the spinal marrow and head like MM. Eulenberg and Guttmann.

1. In fact, the bromide of potassium exercises no elective action. Its specific character consists in attacking equally the

properties of the motor and sensitive nerves, of the brain and spinal marrow, as well as those of the muscles, which it gradually weakens, to end by entirely destroying them.

The sensitive nerves lose their properties before the motor nerves, these last before the spinal marrow, and that again before the muscles.

The heart alone survives during many hours, when it stops; its irritability can be again aroused for some instants, to disappear at last totally. But from the commencement of the physiological or toxic action, the capillary circulation is diminished and the pulsations of the heart are retarded.

As to the respiration it appears to be influenced only mechanically, that is to say, its muscles are paralyzed, like the other muscles, more or less rapidly, early in frogs, and at the moment of death, which it necessarily occasions, in birds and rabbits.

We have verified the fact that the temperature is sensibly lessened in warm-blooded animals, first and during many hours in the region injected, and afterwards throughout the organism. This phenomenon depends upon the diminution of the capillary circulation, at first local, afterward general.

It is the same with the secretions of the mucous membrane and the skin, which are reduced in proportion to the anæmia of those surfaces.

3. We believe we owe in great part the uniformity of our results, differing in many points from those obtained by other experimenters, to the methods we have adopted in our investigation, methods whose importance we do not wish to exaggerate, but which we believe we can recommend for the exploration of the properties of the spinal cord. It consists in withdrawing from the poisoning, not one part, as is done in many cases, but two, so that one of them may react under the influence of the excitation of the other, so long as the cord has not lost its power of transmission, or, in other words, to receive an impression and to react by a movement.

A second precaution consists in varying the mode of poisoning, and above all the place of the hypodermic injection, that we may not attribute to general poisoning the local effects which are due to the imbibition of the bromide.

With these two precautions, we are not led to admit, as other experimenters have done, localizations in the action of the bromide, and to look upon it as a poison of the heart or of the spinal marrow.

We have shown that it kills all, nervous system and muscles; it is a general neuro-muscular poison."—*N. Y. Med. Journal.*

ACTION AND THERAPEUTICAL USES OF BELLADONNA.

—Dr. GEO. HARLEY administered physiological doses, short of toxic effects, to man, the horse, and the dog. The method usually adopted was subcutaneous injection, and the solution one of sulphate of atropia. To man this was administered in doses varying from $\frac{1}{150}$ th to $\frac{1}{30}$ th of a grain. The symptoms were more or less delayed and powerful according to the dose, but the sum of its action seemed to be as follows: After a few minutes there was a rather sudden acceleration of the pulse from twenty beats to double its previous frequency; its volume and force were also augmented; the temperature was increased about 1° F. externally and slightly internally, and there was heaving of the carotids, also giddiness, heaviness and somnolence, nervous delirium and startings; dryness of the tongue, palate, and throat, with huskiness of voice; a dry brown fur on the tongue, which was usually moist at the tip and edges; gradual and increasing dilatation of the pupils. In two or three hours the dryness of throat and tongue gives way, and there is a very acid viscid secretion, of a fishy odor; then the pulse falls, but the pupils are in their highest state of dilatation. There is no effect on the respiration; occasional sighs and prolonged yawns. After the pulse assumes its ordinary rate the giddiness passes off, and he seems the same as before; but he feels languid, and there is dulness of mind and diminution of vision. Headache during these symptoms or afterwards is rare and exceptional. Desire for food soon returns, but during the action of the drug insalivation or deglutition is impossible.

Therapeutical Uses.—1. It is a powerful cardiac stimulant: hence it is useful in many cases of syncope and cardiac asthenia; $\frac{1}{150}$ th of a grain of the sulphate is generally sufficient. 2. It is diuretic, excites the sluggish circulation and torpid kidney. In acute nephritis it calms the nervous irritation and contracts the dilated vessels. In chronic albuminuria it appears to diminish the excretion of albumen. It is a safe medicine in nearly all conditions of the kidney, and tends to keep that organ in a state of healthy excitement. 3. It promotes oxidation in the system. Hence it is useful in the uric acid and lactic acid diatheses.—Abstract from *Gulstonian Lectures in Med. Times and Gazette.*

Selections and Medical Items.

THE OVER-CROWDED MEDICAL TENEMENT HOUSE.—The fields of a professional life are captivating, because they promise ease, honor and wealth. The hard demands of physical labor are willingly exchanged by the unsteady and unphilosophic mind for their Elysian promises, and the temptation for the respectable mechanic, John S. Smith, to become the brilliant Doctor J. Startle'em Smith, with his heavy chronometer and jaunty buggy, is quite irresistible, when it can be accomplished with the savings of a few months, or, through the college scrambling for patronage, with a simple promise to pay.

Through our present "rigid system of medical education," there are turned out annually by the colleges of this country, nearly three thousand doctors. Were the good old Domine Sampson among us to remark upon this circumstance, he would be compelled to coin a superlative for his ejaculated "prodigious!" in order to justly express the magnitude of the case.

These three thousand doctors, certain of success and eager for the opportunity to grapple with fortune, scatter themselves throughout the length and breadth of the land, and begin a conflict which, to at least two-thirds of them, is to be but a series of heart-burning disappointments; of hopes blasted before their fruition, and a final banishment from the field of struggle.

We think it safe to say, there is no community in this wide country, which has not at least one third more physicians than that community can legitimately support. To this already-plethoric condition of the profession, there is being added the yearly pumpings of the colleges; and supposing that one thousand physicians annually retire, through all causes, from the medical ranks, there is still added a surplus of two thousand per year.

From this enormously repleted state of the profession there must flow, as a natural consequence, a strife for "business" at once unprofessional, debasing and humiliating. . . . With the selfish view of beating down a rising and perhaps a meritorious rival, aspersions of professional character are freely resorted to, common cause for the time being made amongst the more unsuccessful members. We are acquainted with the case of a city of thirty thousand people, possessing perhaps a full share of medical ability, yet without a single representative man whose name passes current throughout the community for the possession of genuine medical erudition. Yet in this same city quackery flourishes, as the inevitable result of the indisposition of regular physicians to acknowledge and proclaim each other's merits.—*Leavenworth Medical Herald.*

MOVEMENTS OF THE SENSITIVE PLANT.—M. Bert and M. de Blondecu have published in the *Comptes Rendus* some extremely interesting observations on this subject. M. Bert shows that the natural and regular movements of the leaves, which take place in the sensitive plant, are produced by a different cause from that to which the sudden contraction is due when the plant is touched by the fingers. M. de Blondecu's observa-

tions are exceedingly curious and well worth further examination. He submitted three plants to the influence of an electric current from a Ruhmkorff's coil. The first he acted on for five minutes; when left to itself, the plant seemed prostrated, but after a quarter of an hour the leaves opened and it seemed to recover itself. The second specimen was acted on for ten minutes. The plant was prostrate for an hour, after which it slowly recovered. The third specimen was galvanized for twenty-five minutes, but it never recovered; and in twenty-four hours it had the appearance of a plant struck with lightning. A fourth plant was etherized, and then exposed to the current. Strange to say, the latter had not any effect; the leaves remained straight and open; thus proving, says M. de Blondecu, that the mode of the contraction of the leaves of the sensitive plants is in some way allied to the muscular contraction of animals.—*Quarterly Jour. of Science.*

DR. JOHNSON.—We have received a communication asking us to expose the falsity of the claims of a certain Dr. Johnson, who is going about extorting money from medical men, fortified by letters which he has obtained by some underhand means from members of the profession.

APPOINTMENT.—Dr. John Homans has been appointed one of the visiting surgeons of the Carney Hospital, in place of Dr. P. A. O'Connell, resigned.

MEDICAL DIARY OF THE WEEK.

MONDAY, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.
TUESDAY, 9, A.M., City Hospital, Medical Clinic; 10, A.M., Medical Lecture. 9 to 11, A.M., Boston Dispensary. 10-11, A.M., Massachusetts Eye and Ear Infirmary.

WEDNESDAY, 10 A.M., Massachusetts General Hospital Surgical Visit. 11 A.M., OPERATIONS.

FRIDAY, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., OPERATIONS. 9 to 11, A.M., Boston Dispensary.

SATURDAY, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., OPERATIONS.

TO CORRESPONDENTS.—Communications received:—On Mississippi Spring Water.

DIED.—In Newburyport, September 9th, Dr. Jonathan Greenleaf Johnson, a graduate of Harvard University in the class of 1810, and Fellow of the Mass. Medical Society in 1818, aged 78 years.—In Ossipee, N. H., Sept. 12th, Alvah Moulton, M.D., 69 years 11 mos.

DEATHS IN BOSTON for the week ending Saturday noon, September 12th, 1866. Males, 60—Females, 46.—Accident, 2—apoplexy, 2—asthma, 2—disease of the bladder, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 3—canker, 1—cholera infantum, 25—consumption, 6—convulsions, 1—croup, 1—diarrhea, 3—drowned, 1—dysentery, 6—scarlet fever, 1—typhoid fever, 9—gastritis, 1—disease of the heart, 3—infantile, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 3—measles, 1—old age, 3—paralysis, 1—premature birth, 3—prostatitis, 1—puerperal disease, 1—suicide, 1—teething, 2—unknown, 6—whooping cough, 3.—Under 5 years of age, 65—between 5 and 20 years, 5—between 20 and 40 years, 15—between 40 and 60 years, 7—above 60 years, 14. Born in the United States, 77—Ireland, 16—other places, 13.